

6.  $\frac{dy}{dx} = x^2/(2y+1)$   
 sep. var.

a) slope field

b) slope pos

c) particular soln  
 solve  
 find y  
 integrate

$$\int \frac{dy}{2y+1} = \int x^2 dx$$

$$\frac{\ln|2y+1|}{2} = \frac{x^3}{3} + C$$

$$\ln|2y+1| = \frac{2}{3}x^3 + C$$

$$|2y+1| = e^{\frac{2}{3}x^3} \cdot e^C$$

$$2y+1 = A e^{\frac{2}{3}x^3}$$

$$11 = A$$

$$2y+1 = 11 e^{\frac{2}{3}x^3}$$

$$y = \frac{11 e^{\frac{2}{3}x^3} - 1}{2}$$

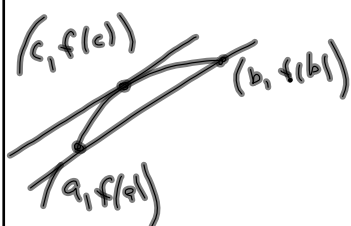
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Review #8

MVT

If  $f(x)$  is continuous on  $[a,b]$  and  
 differentiable on  $(a,b)$

Then there exists a "c" between a & b  
 such that  $f'(c) = \frac{f(b)-f(a)}{b-a}$



inst. rate

ave rate

slope of tan

slope of sec

Mar 11-12:28 PM